Preparing for the
Tennessee
End-of-Course Assessment

Math Foundations II

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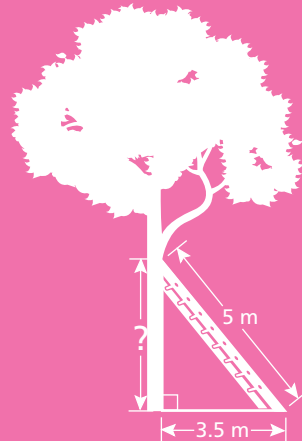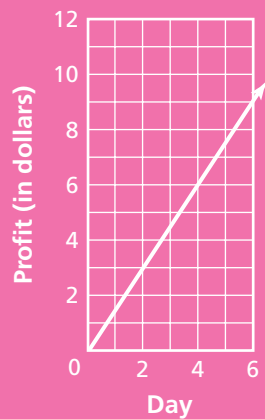
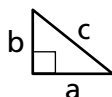| Median	14.5
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Math Foundations II Reference Page

Abbreviations Used On Reference Page:

A = area
P = perimeter
ℓ = length
w = width

Pythagorean Theorem:

$$a^2 + b^2 = c^2$$

Area (A) of a Rectangle:

A = ℓw

Perimeter (P):

Any Polygon: P = sum of side lengths
Rectangle: P = 2ℓ + 2w

n	$\sqrt{n}$	n^2
1	1.000	1
2	1.414	4
3	1.732	9
4	2.000	16
5	2.236	25
6	2.449	36
7	2.646	49
8	2.828	64
9	3.000	81
10	3.162	100
11	3.317	121
12	3.464	144
13	3.606	169
14	3.742	196
15	3.873	225
16	4.000	256
17	4.123	289
18	4.243	324
19	4.359	361
20	4.472	400
21	4.583	441
22	4.690	484
23	4.796	529
24	4.899	576
25	5.000	625

Preparing for the
End-of-Course Assessment Program

Math Foundations II

Introduction

What is happening?

A testing program entitled Tennessee End-of-Course Assessment Program has been established to meet the Tennessee mandate for end-of-course assessments in Tennessee secondary schools. The Tennessee State Department of Education is implementing this new system of assessment in several high school classes, starting with Math Foundations II in the 2001-2002 school year. The sample questions in this pamphlet are representative of the item types and item formats that will be used in the actual test.

What are the questions testing?

The questions assess the content standards covered by each course as described in the performance indicators developed by the Tennessee State Department of Education and listed on their website. Each test shall include, but shall not be limited to, the performance indicators covered by the sample questions in this pamphlet.

Who will be tested?

All students taking Math Foundations II will be tested.
Tests may be given midyear for block schedules or at the end of the year.

How many questions are there?

Each test contains 60 multiple-choice questions.

How long will the tests take?

Students will have ample time to read and answer each of the questions. Each test will take approximately 90 minutes to complete.

How will the tests be scored?

The answers to the multiple-choice questions will be scored by machine. The test gives information about how well students understand the course content.

Can calculators be used?

Students may use their own calculators for the test. The use of calculators on these tests is optional. No questions on the test require a calculator. Sharing calculators during testing is not permitted. See the Examiner's Manual for guidelines on calculator use.

Can other materials be used?

A reference page, similar to the one included in this pamphlet, will be on the inside front cover of the actual test. This page includes a list of formulas, equations, and tables for use during testing.

How do I use these sample questions?

The questions in the pamphlet are a representative sample of the types of questions that will be in the Math Foundations II test. The questions are presented in a format similar to that which will be used in the actual test.

Reporting Categories have been provided for the questions in this pamphlet only. These Reporting Categories group the Math Foundations II Performance Indicators together. When students receive their reports from the test, these Reporting Categories will be used to report scores on student performance. The questions in the actual test will not have this identifying information, nor will they be ordered as shown in this pamphlet.

These questions can be used as a classroom learning session or as an individual, short practice test to prepare students for the actual test. Various item formats have been selected to better familiarize students with the actual test format.

An answer key for the sample questions is provided at the end of this pamphlet.

What tips are there for taking the test?

RELAX: It is normal to be somewhat nervous before the test. Remember that the score is only one of a number of measures of your performance.

LISTEN: Listen to and read the test directions carefully. Ask for an explanation of the directions if you do not understand them. Follow the directions.

PLAN YOUR TIME: Do not spend too much time on any one question. If a question seems to take too long, skip it and return to it later if you have extra time. First answer all the questions you are sure about.

THINK: If you are not sure how to answer a question, read it again and try your best to answer the question. Rule out answer choices that you know are incorrect and choose from those that remain.

Numbers 1 and 2

1 What is the correct prime factorization of 76 ?

A 2×37

B $2 \times 2 \times 19$

C $2 \times 3 \times 13$

D $2 \times 2 \times 2 \times 3 \times 3$

2 What is the opposite of $\frac{5}{3}$?

F $\frac{-5}{3}$

G $\frac{-1}{3}$

H $\frac{1}{3}$

J $\frac{3}{5}$

Numbers 3 and 4

3 Which is the best estimate for $\frac{19}{204} \times \frac{42}{397}$?

A $\frac{1}{100}$

B $\frac{1}{10}$

C 1

D 10

4 **Simplify:** $(8 - 4)^2 \div 2 + 6$

F 2

G 8

H 10

J 14

Numbers 5 and 6

5 Solve: $4x - 6 = {}^-22$

   A $\;{}^-20$

   B $\;{}^-7$

   C $\;{}^-4$

   D $\;11$

6 What is the value of $a(b - 5)$ when $a = 6$ and $b = 9$?

   F $\;9$

   G $\;15$

   H $\;24$

   J $\;49$

Numbers 7 and 8

7 David is buying party hats for his little sister's birthday party. He has these three brands to choose from:

Brand	Hats per Package	Price
Party Goods	6	$1.29
Happy Hats	8	$1.89
Power Party	10	$2.15

Which of these statements is <u>true</u>?

   A Power Party costs more per hat than Party Goods.

   B Party Goods is the most expensive brand per hat.

   C Happy Hats is the least expensive brand per hat.

   **D** Party Goods and Power Party cost the same amount per hat.

Numbers 7 and 8

8   Jason is getting ready to go on a 14-day backpacking trip. He wants to have 8 iodine tablets for each day to purify his drinking water. The tablets are sold in bottles of 20. How many bottles does Jason need to buy?

    F   5 bottles

    G   6 bottles

    H   7 bottles

    J   8 bottles

Numbers 9 and 10

**9**   Valerie enjoys bird watching. She especially likes hawks. The graph below records the number of hawks Valerie saw each week for 8 weeks.
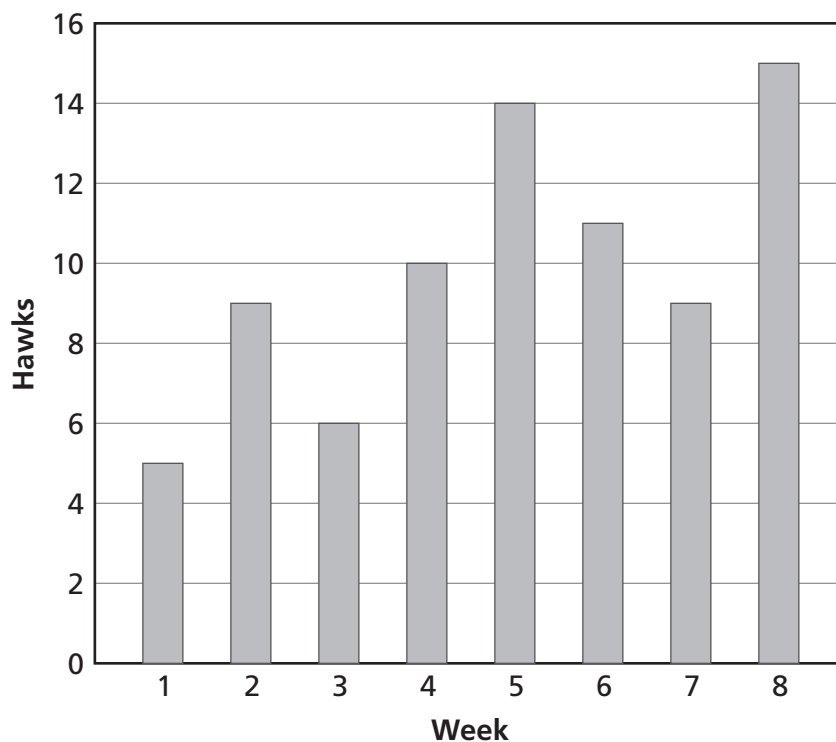

Which of these statements is <u>false</u>?

    A   Valerie saw the most hawks in Week 5.

    B   Valerie saw the fewest hawks in Week 1.

    C   Valerie saw the same number of hawks in Week 2 and Week 7.

    D   Valerie saw fewer hawks in Week 3 than in either Week 2 or Week 4.
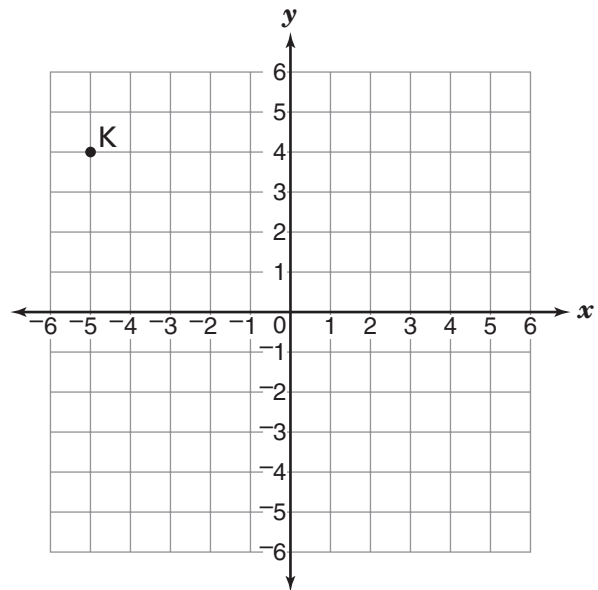
Numbers 9 and 10

10 Lindsey is reading a novel at a steady rate of one page every two minutes. Which of these graphs correctly depicts the number of pages she has read as a function of time?
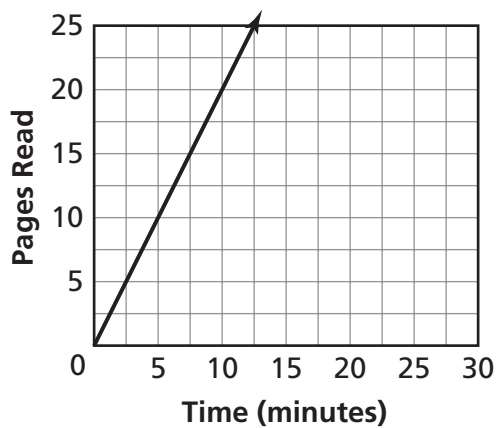
F
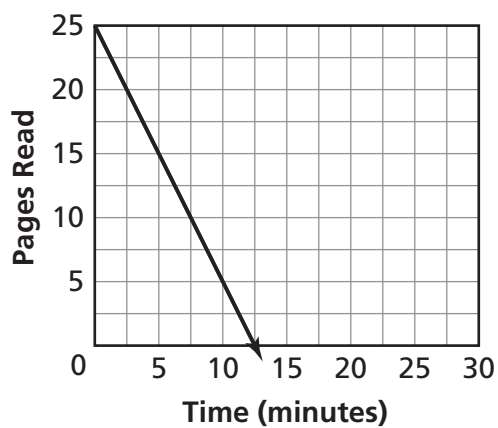
H
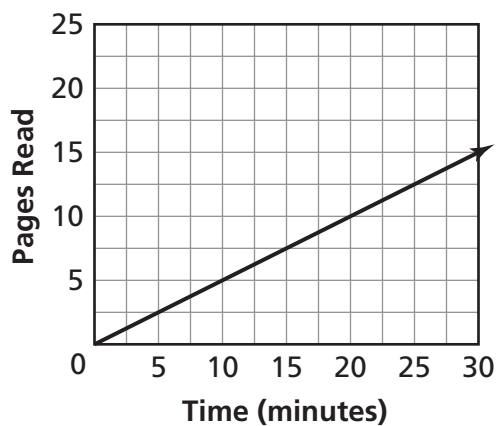
G
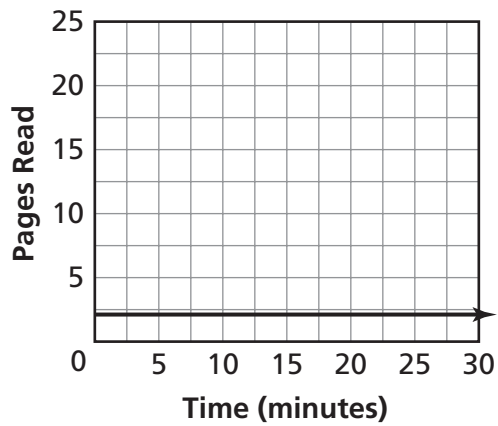
J

Numbers 11 and 12

11 Which ordered pair represents the coordinates of Point K shown on the graph?

A (5, ⁻4)

B (⁻5, 4)

C (4, ⁻5)

D (⁻4, 5)

12 John has a rectangular flower bed that is 4 feet wide and 16 feet long. What is the area of the flower bed?

F 12 square feet

G 20 square feet

H 40 square feet

J 64 square feet

Answer Key

Item Number	Correct Answer
1	B
2	F
3	A
4	J
5	C
6	H
7	D
8	G
9	A
10	G
11	B
12	J